

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 11, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor *DS 06/17/09*
Steve K. Christensen, Senior Environmental Scientist/Hydrologist, Lead *SKC*

FROM: David Darby, Senior Environmental Scientist *DD*

RE: Degasification Amendment, Canyon Fuel Company, LLC, Dugout Canyon Mine, C/007/0039, Task ID #3274

SUMMARY:

The Division received a mine plan amendment from Canyon Fuel Company LLC submitted on April 30, 2009 to install two mine methane degasification wells at the Dugout Canyon Mine. Several degasification wells have been approved thus far for the mine. These Degasification wells are labeled G-25 and G-26. The wells function to remove methane from the underground coal panel and allow safer mining conditions. The new proposal will not affect the local or regional geology features. Removing the natural gas from the panel will allow greater recovery of coal resources.

DEFICIENCIES

None

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

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Analysis:

The Permittee submitted Plate 1-4 showing the location of all the degasification bore holes (wells) including the new degasification wells G-25 and G-26. The sites lies within the current permit area near Pace Canyon.

Findings:

The Permittee has addressed the minimum requirements of the Permit Area Section of the regulations.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

The Permittee provided information to describe the geology, and mining of the expansion area. Regional geology is described in Chapter 6 of the MRP. The geology submittal for the extension area consists mostly of maps. Plate 6-1 shows the geology of the permit and expansion area. The area lies above the escarpment in the Book Cliffs.

The PHC, Section 728, in Chapter 7 states the information for acid and toxic forming material is in the Geology Section, Chapter 6. Acid and toxic and alkaline chemical analyses are mentioned in Section 624.300. The information on acid and toxic forming materials to address R645-301-624.310 through 624.330 are presented in Appendices 6-1 and 6-2. Roof and floor and seam analyses for the Rock Canyon seam are provided in Appendix 6-2. Roof and floor analyses for the Gilson coal seam are provided in Appendix 6-1. The analyses are dated August 24, 1995. A sample location is identified in Figure A-1 from the Gilson Coal Seam in the Dugout Canyon Mine. The operator used Table 2 in the "Guidelines for Management of Topsoil and Overburden for Underground and surface Coal Mining" as a guide. Mine refuse is analyzed frequently by Canyon Fuel Company (Dugout Mine) for acid and toxic materials. Acid and toxic sampling was conducted of the roof, floor and coal seam to be mined.

Findings:

The information provided by the Permittee meets the minimum requirements of the Environmental Resource Information – Geologic Resources Information section of the regulations.

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MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Coal Resource and Geologic Information Maps

The geology map, Plate 6-1, illustrates the stratigraphy of the Dugout Canyon Mine area. A geology map shows the expansion area is capped with the Colton Formation. Mining of the IBC will take place in the Gilson coal seam of the Blackhawk Formation. The dip of the strata is to the north-northeast at approximately 10 degrees. The approximate location of the Gilson is depicted on the map. The legend shows the Plate 6-2 in the MRP shows the relation of the two coal seams and the top of the Kenilworth Sandstone. The Gilson Coal seam lies below the Rock Canyon Coal seam. Figure 6-1 and Plates 6-3, 6-3a and 6-3b are geologic cross-sections that illustrate the stratigraphic relations of the permit area.

An updated overburden thickness map, Plate 6-4 - Rock Canyon Seam/Gilson Seam Overburden Thickness has been submitted. The operator also submitted two overburden isopach maps Plate 6-6 and 6-7 in the Confidential Folder

Permit Area Boundary Maps

The Permit area boundary is illustrated on several maps in the IBC submittal. No mining is projected outside the proposed permit area.

Well Maps

No well or boreholes are currently proposed for the IBC.

Findings:

The information provided by the Permittee meets the minimum requirements of the Maps, Plans and Cross Sections of Resources Information section of the regulations.

OPERATION PLAN

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

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Analysis:

Maps have been supplied showing the areas of projected mining. Installation of the degasification well to purge methane gas from the planned mine operation will ensure maximum coal recovery.

Findings:

The Permittee has submitted sufficient information to address the minimum requirements of the Coal recovery regulations.

Recommendation:

The amendment is recommended for approval.

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